PROJECT NUMBER: 2526
PROJECT TITLE : Greenhouse Operations and Cooperative Tobacco Variety Evaluation Programs
PROJECT LEADER : R. T. Bass
PERIOD COVERED : December, 1990

I. GREENHOUSE STUDIES AND SUPPORT ACTIVITIES

(R. Bass, G. Newell and G. West)

A. **Objective:** Maintain the R&D Greenhouses, conduct plant research studies, provide greenhouse-grown tobacco materials for support of other R&D programs, and provide requested assistance for special projects.

B. **Results:** During this period hand fabricated cigarettes were made for samples H1052, H1053, and H1054 as requested. These cigarettes were for the lotus program and are to be utilized in subjective evaluations. The Rizla RYO maker was used to make these cigarettes. A total of 18 Greenhouse grown tobacco samples from the Hydroponic Groups 24, 25, and 26 were ground on the Wily Mill using a 20 mesh screen. These samples will be submitted for total alkaloid analyses.

The air pressure control scrub tanks for the Greenhouse plant growth chamber system contained NaOH solution, which was assayed and then disposed of in the proper manner as directed by the R.S.O. An order has been placed for the fabrication of two new plexiglas tanks to replace the old ones.

The leaves from the eighteen Dryopteris Filix-mas fern plants have been harvested and provided to M. Zimmermann. He was also provided with a quantity of air dried leaves from the bittersweet Solanum Dulcamara plants.

The harvest of the forty Burley 21 plants for Group 27 has been completed and the root tissue provided to Project 1904. Two plants were selected and measurements for leaf size and weight were made. Leaf samples were oven dried for analyses.

The regular Greenhouse plant production activities were completed, including the preparation of 220 gallons of nutrient solution, the harvesting of tobacco and ferns, several insecticide applications, the performance of all culture practices, and the seeding and transplanting of Burley 21, K-326, and Speight G-28 tobaccos.

The regular Greenhouse operational and maintenance tasks have been performed on schedule including the rebuilding of the Kool Cel system water pump in order to have a spare on hand, if needed.

A sample containing 50 fresh green tobacco leaves was provided to Project 6502 as requested for use in their B.O.B. display.

C. **Plans:** Greenhouse operations and maintenance will be continued along with all requested support activities.

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Source: https://www.industrydocuments.ucsf.edu/docs/qrjm0000

D. **References:**

1. G. Newell, N.B. No. 8762

2. G. West, N.B. No. 8559

3. R. Bass, N.B. No. 8999

II. COOPERATIVE TOBACCO VARIETY EVALUATION PROGRAM

(R. Bass, G. Newell and G. West)

A. **Objective:** To participate in the cooperative tobacco industry program in order to assure that the quality of all new tobacco varieties meets or exceeds all requirements as defined by minimum standards program.

B. **Results:** The annual meeting of the Flue-Cured Tobacco Variety Evaluation Committee was attended in Raleigh, N.C. For the 1990 Regional Farm Test, evaluation of the data for chemical, physical, agronomic, and smoke flavor characteristics showed the following test entries to be acceptable and eligible for release as new varieties in 1991. They are: NC7029 USDA, Speight G-117, NC6085 USDA, RG8, Reams 137, and RG22. The entry sponsors indicated that Speight G-117 will be released as Speight G-117 and that Reams 137 will be released as Reams 713. Entry Speight G-122 was unacceptable because of genetic instability, and entry Reams 124 was unacceptable because of undesirable smoke flavor. The control varieties for the test were NC 2326 and NC 95. For the 1990 Regional Small Plot Test, there were a total of 24 entries, 15 of which were acceptable and are eligible for advancement to the 1991 Regional Farm Test. Following the regular meeting, a business meeting session was held for consideration and discussion of several suggestions that have been offered regarding the organization and implementation of the Regional Program.

The analyses for the 399 samples from the 1990 South Carolina Mammoth Tobacco Test have been completed. The total alkaloid and sugar results have been reported to personnel at the Pee Dee Research and Education Center.

On December 4th the Annual Tobacco Day Meeting, presented by the N.C.S.U. Plant Pathology Extension Service, was attended at Raleigh, N.C. Their crop information showed the 1990 N.C. tobacco crop disease losses (6%) to be ranked in the following order: 1.) Black Shank, 2.) Granville Wilt, 3.) Mosaic, 4.) Root Knot, 5.) Brown Spot, and 6.) Target Spot. The crop survey showed the 1990 flue-cured tobacco variety planted acreage to rank as follows: 1.) K- 326, 2.) K-399, 3.) NC 37 NF, 4.) K-358, 5.) Speight G-28, and 6.) K-149. There is some concern about the Tobacco Spotted Wilt Virus disease because there are no varieties available which are resistant to it. The only effective control practice presently available is to use disease free transplants.

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The combined 1990 Burley Tobacco Variety Evaluation Test including tobaccos from North Carolina, Virginia, Tennessee, Kentucky, and Ohio, was attended in Greeneville, TN. at the Tobacco Experiment Station. In cooperation with the PM Leaf Department, a total of 635 leaf tobacco samples from the Regional Farm Test, the Regional Small Plot Test, and the Regional Growth Control Regulator Test were inspected. The tobaccos were evaluated for color, body, texture, and quality suitability for PM use.

C. Plans: To continue to participate in the Cooperative Tobacco Variety Evaluation Program.

D. References:

1. R. Bass, N.B. No. 8999

2. G. Newell, N.B. No. 8762

3. G. West, N.B. No. 8559

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